



# **ECONOMICS OF SWEETENER MARKETING: An Annotated Bibliography of Selected References**



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## ABSTRACT

Bibliography lists selected references on the marketing of important sweeteners used in the United States. Entries are categorized under sugarcane, raw cane sugar, refined cane sugar, sugarbeets, beet sugar, corn sweeteners, noncaloric sweeteners, honey, maple products, sorghum, utilization, and general.

Key Words: Bibliography, Marketing, Sweeteners, Sugar, Corn sweeteners, Honey, Maple products, Noncaloric sweeteners.

## PREFACE

This bibliography is intended primarily for researchers and others interested in marketing aspects of the U.S. sweetener industry. It annotates marketing reports, books, and trade and periodical journals on sugar, corn sweeteners, maple products, and noncaloric sweeteners. References are alphabetically listed by author and title.

The bibliography is based primarily on the Bibliography of Agriculture. The call numbers are those of the National Agricultural Library, except in those instances in which publications are available only in other libraries. In these cases, both call numbers are listed.

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### Sources Consulted

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U.S. Department of Commerce Library  
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U.S. Department of Labor Library  
Industrial Arts Index.

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INTRODUCTION

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**Martin, R. G. RAW SUGAR--WEIGHT AND POLARIZATION CHANGES DURING BULK SHIPMENT FROM PUERTO RICO.** U.S. Dept. Agr., Econ. Res. Serv. ERS-7, 12 pp. June 1961. A281.9 AG83E.

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## SUGARBEETS

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Honey industry needs to know more about its customers.

American Bee Journal. FUTURE DEVELOPMENTS IN HONEY HANDLING. 100(3): 92-93. Mar. 1960. 424.8 AM3.

Use of cooperative packing and blending plants and/or large-quantity buyers.

Amos, J. M. WHO HURTS WHOM? *Gleanings Bee Cult.* 86(9): 541-542, 651, 570-571. Sept. 1958. 424.8 G47.

Honey marketing by large and small producers.

Anderson, E. J. HONEY MARKETING. *Pa. Beekeeper* 26(4): 12-13. Dec. 1951. 424.8 P38.

Types of honey marketed: comb, chunk, extracted, finely crystallized, or creamed.

Andrew, H. HOW FINGER LAKES HONEY PRODUCERS MAKE HONEY SALES TO THE TRADE IN A CONSUMER PACKAGE UNDER ITS OWN LABEL. *Amer. Coop.* 26: 471-472. 1954. 280.29 AM 3A.

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Bauer, F. W. HONEY MARKETING. *Calif. Agr. Expt. Sta. Bul.* 776. 71 pp. Dec. 1960. 100 C12S.

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Beck, C. R. DO WE WISH TO SURVIVE? *Amer. Bee J.* 100(4): 146-147. Apr. 1960. 424.8 AM3.

Use of advertising to increase honey consumption and prices.

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Demand for honey is not only inelastic relative to prices but, over long periods of time, is also inelastic relative to income changes.

Bell, A. G. FOR GOODNESS SAKE, EAT HONEY. *Amer. Bee J.* 106(5): 172-173. May 1966. 424.8 AM3.

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Bell, A. G. PROMOTE YOUR HONEY. *Gleanings Bee Cult.* 96(7): 393-396. July 1968. 424.8 G47.

Roadside marketing of honey.

Berthold, R. and Benton, A. W. CREAMED HONEY WITH DRIED FRUITS. *Gleanings Bee Cult.* 95(12): 718-721. Dec. 1967. 424.8 G47.

Mixing dried fruits with finely crystallized honey.

Berthold, R., and Benton, A. W. CREAMED HONEY--FRUIT SPREADS. Food Technol. 22 (1): 83-85. Ref. Jan. 1968. 389.8 F7398.

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Buss, J. D. SALES ANALYSIS OF HONEY. Amer. Bee J. 98(11): 431-433. Nov. 1958. 424.8 AM3.

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Buss, J. D. SALES PROMOTION THROUGH GROUP EFFORT. BUSS REPORT, 5. Amer. Bee J. 99(1): 11-13. Jan. 1959. 424.8 AM3.

Benefits of associations to honey packers and producers.

Cale, G. H. FROM DOOR KNOCKING TO ROUTE SELLING. Amer. Bee J. 100(7): 266-268. July 1960. 424.8 AM3.

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Cale, G. H. THE MARKET--OUR WORLD OR THEIRS. Amer. Bee J. 96: 358-360. Sept. 1956. 424.8 AM3.

Special packs, specialities, and roadside stands are discussed as means of the honey producer disposing his crop profitably.

Carter, A. P. BACKGROUND FACTS ON HONEY. U.S. Dept. Agr. Ext. Serv., 1952. 2 pp. 1.913 F4B12.

Food value of honey.

Childers, L. F. SOME "VITAL STATISTICS" IN HONEY MARKETING. Amer. Bee J. 91: 416-417, 445. Oct. 1951. 424.8 AM3.

When honey producers learn how to evaluate their comb, and know some of the avenues of loss in packing this honey, chunk honey and extracted honey without comb will not sell for the same price.

Clarke, W. W. THE BEGINNER AND HIS BEES. USING THE CROP. Amer. Bee J. 96: 367-368. Sept. 1956. 424.8 AM3.

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Clay, H. J. HONEY PRICE SUPPORT PROGRAM. Gleanings Bee Cult. 86(3): 169-170, 190. Mar. 1958. 424.8 G47.

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Clay, H. J. THE HONEY PRICE SUPPORT PROGRAM. Fla. State Plant Bd. Bul. 5: 66-70. Oct. 1954. 464.9 F662Q.

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Clay, H. J. HOW THE HONEY PRICE SUPPORT PROGRAM BENEFITS THE BEEKEEPER. Fla. State Plant Bd. Bul. 8: 26-31. Mar. 1956. 464.9 F662Q.

Stabilizing the market and maintaining a more uniform price level are the greatest benefits of honey price support program.

Connell, C. A. HONEY COOPERATIVES. Fla. State Plant Bd. Bul. 8: 19-20. Mar. 1956. 464.9 F662Q.

Discusses advantages of the Florida Honey Cooperative to producers when they are preparing to market their honey.

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Honey, pollen, wax, propolis, and venom are bee products used by man.

Dirks, C. O. MAN, BEES, AND HONEY. Amer. Bee J. 106(12): 452-453, 456. Dec. 1966. 424.8 AM3.

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Floyd, C. D. LOST IN THE WOODS. Amer. Bee J. 98(5): 195-196. May 1958. 424.8 AM3.

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Freeman, B. F. THE FLORIDA HONEY COOPERATIVE. Fla. State Plant Bd. Bul. 8: 67-68. Mar. 1956. 464.9 F662Q.

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Checkoff plan preferred to Government marketing order.

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Gouget, C. W. DIRECT TRAFFIC TO YOUR ROADSIDE STAND. Gleanings Bee Cult. 84: 487-489. Aug. 1956. 424.8 G47.

Discusses glamour of purchasing honey direct from producer.

Gouget, C. W. KNOW YOUR MARKET. Gleanings Bee Cult. 79: 88-89, 124-125. Feb. 1951. 424.8 G47.

Weather, color and flavor, size of package, price, and marketing method determine successful marketing of honey.

Gouget, C. W. LET'S TALK SALES. Gleanings Bee Cult. 81: 458-460. Aug. 1953. 424.8 G47.

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Discusses cost determination, price determination, competition, consumer purchasing ability, and reliable bookkeeping system.

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Greenwood, A. A. THE CHECK-OFF SYSTEM--A COMPLEMENT TO THE HONEY PRICE SUPPORT PROGRAM. *Gleanings Bee Cult.* 86(3): 171-173. Mar. 1958. 424.8 G47.  
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Provides information on honey price support program.

Haydak, M. H. ROADSIDE HONEY MARKETING. *Amer. Bee J.* 103(11): 410-412. Ref. Nov. 1963. 424.8 AM3  
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Hoffer, Frederick J. THE COST OF PACKING AND DISTRIBUTION OF FLORIDA HONEY. The Univ. of Fla. 1961. 241.8 M58.  
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Kinds of Florida honey, selling practices, seasonal distribution, transportation, and distribution of sales to various buyers and markets.

Holroyd, W. M. BEELINE FROM PRODUCER TO CONSUMER--SIOUX HONEY'S (ASSOCIATION) DISTRIBUTION AIM. *News Farmer Coop.* 33(11): 12, 18. Feb. 1967. 166.2 N47.  
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Quantity and prices of honey sold, and number of buyers.

Kalthoff, C. PACKING AND DISTRIBUTING BULK COMB HONEY. *Amer. Bee J.* 95: 180-181. May 1955. 424.8 AM3.  
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Kalthoff, C. SELLING HONEY TO SUPERMARKETS. *Gleanings Bee Cult.* 91(1): 22-23. Jan. 1963. 424.8 G47.  
Supermarkets eliminate route system of marketing honey.

Kennerly, A. B. FUTURE MARKET FOR HONEY. *Gleanings Bee Cult.* 94(5): 268-271. May 1966. 424.8 G47.  
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Kennerly, A. B. WHEN THE FOOD AND DRUG INSPECTOR CALLS. Gleanings Bee Cult. 92 (2): 75-79. Feb. 1964. 424.8 G47.

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Lloyd, J. BY-PRODUCTS OF THE BEE-HIVE. Welsh Bee J. 2: 114-115. Oct. 1947. 424.8 W462.

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Mattutat, F. H. THE BULK HONEY DEALER. Amer. Bee J. 106(7): 249, July 1966. 424.8 AM3.

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Maxwell, H. L. THE VANISHING HONEY SUPPLY. Gleanings Bee Cult. 84: 274-275. May 1956. 424.8 G47.

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Patty, G. E. U.S. HONEY SALES LAG ON WORLD MARKET. For. Agr. 6(21): 6-7. May 20, 1968. A281.9 F76F0.

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Peattie, D. C. HONEY-GOLDEN WONDER. Nature Mag. 42: 163-166. Apr. 1949. 409.6 N214.

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Pendarvis, L. T. MARKETING HONEY. Fla. State Plant Bd. Bul. 5: 76-79. Oct. 1954. 464.9 F662 Q.

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Rahmlow, H. J. OUR NATION'S HIGHEST PRICED HONEY. Gleanings Bee Cult. 88(9): 532-534. Sept. 1960. 424.8 G47.

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Sale of honey by producers versus nationally known packers.

Rowland, C. A. MORE MONEY FOR YOUR HONEY. Amer. Bee J. 10(6): 220. June 1961. 424.8 AM3.

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Rusher, R. H. THE HONEY INDUSTRY NOW OR NEVER. Gleanings Bee Cult. 81: 407-408, 443. July 1953. 424.8 G47.

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Shephard, L. STABILIZED PRICES FOR HONEY. Good Earth Mag. 2(7): 13. May 1948. 6 G59.

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Willson, R. B. THE ROLE OF THE DEALER. *Gleanings Bee Cult.* 82: 525, 573. Sept. 1954. 424.8 G47.

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#### MAPLE PRODUCTS

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Barraclough, K. E. MAPLE SYRUP AND SUGAR PRODUCTION IN NEW HAMPSHIRE. *N.H. Agr. Col. Ext. Bul.* 103, 28 pp. Feb. 1952. 275.29 N45.

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Bell, R. D. COSTS AND RETURNS IN PRODUCING AND MARKETING MAPLE PRODUCTS.

*Cornell Univ. Col. Agr. A.E.* 1016, 43 pp. Dec. 1955. 281.9 C81.

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Bell, R. D. MARKETING NEW YORK MAPLE SYRUP. *Cornell Univ. Col. Agr. Farm Econ.* 203: 5381-5383. Feb. 1956. 280.8 C812.

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Bissell, L. P. A FARM FOREST CROP WITHOUT A SURPLUS? *Noeast. Logger.* 4(10): 12-13, 55. Apr. 1956. 99.81 N812.

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Conklin, H. R. FUTURE OF STRAIGHT MAPLE AND BLENDED MAPLE SIRUPS. (Sum.) Conf. Maple Prod. Rpt. Proc. 2: pp. 11-14. 1953. A67 R31.

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Foulds, R. T. CUTTING MAPLE SYRUP PRODUCTION COSTS. N. Logger Timber Processor 15(9): 10-11, 34. Mar. 1967. 99.81 N812.

An increase in labor efficiency through use of improved equipment can reduce production costs.

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Gray, F. D. THE MAPLE SWEETENER SITUATION. U.S. Dept. Agr. Econ. Res. Serv. NFS-115, pp. 26-31. Feb. 15, 1966. 1.941 S2F73.

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Krivak, J. SUGAR BUSH CONSERVATION. Soil Conserv. 22(8): 171-172. Mar. 1957.

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Maits, B. COLD IN THE SUGAR BUSH. *Hoard's Dairyman* 103(6): 320-321. Mar. 25, 1958. 44.8 H65.

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Describes central evaporator plant at Kingsley, Mich.

Monroe, R. J. SUBJECTIVE TESTING OF TOBACCOS TREATED WITH HIGH-FLAVORED MAPLES. *Conf. Maple Prod. Rpt. Proc.* 3: 33-34. 1956. A67.9 R31.

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Pasto, J. K., and Taylor, R. D. ECONOMICS OF THE CENTRAL EVAPORATOR IN MAPLE SYRUP PRODUCTION. *Pa. Agr. Expt. Sta. Bul.* 697, 28 pp. Ref. Aug. 1962. 100 P381.

Discusses economics of using central evaporators to process maple sap into syrup.

Peterson, T. A. ECONOMIC ASPECTS OF WISCONSIN'S CENTRAL EVAPORATION PLANT. *Conf. Maple Prod. Proc.*, 6th Conf., pp. 10-13. 1965. A67.9 R31.

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Popular Mechanics Magazine. SAPS RUNNING. 113: 162-163. Feb. 1960. Lib. Congress T1 . P77.

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Rees, F. A BALANCE SHEET OF THE MAPLE INDUSTRY. Conf. Maple Prod. Rpt. Proc. 2: 16-20. 1953. A67.9 R31.

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Developments in central evaporating plants and maple syrup festivals are main sources of growth in Wisconsin's maple industry.

Sipple, L. THE NATIONAL MAPLE SYRUP COUNCIL. Conf. Maple Prod. Rpt. Proc., 5th Conf., pp. 13-17. 1962. A67.9 R31.

History of the National Maple Syrup Council.

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Taylor, R. D., and Pasto, J. K. AN ECONOMIC MODEL OF VERTICAL INTEGRATION AND MULTIPLE PRICING BASED ON THE MAPLE SYRUP INDUSTRY. Agr. Econ. Res. 20(3): 101-106. July 1968. 1EC 7ACR.

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Wasserman, A. E., Underwood, J. C., and Willets, C. O. FLUFFED MAPLE PRODUCTS--A NEW USE FOR MAPLE SIRUP. U.S. Dept. Agr., Agr. Res. Serv. ARS-73-39, 6 pp. folder. Dec. 1962. A381 R31A.

Fluffed maple products provide an outlet for darker sirups, have more stable sugar crystals, and use less sirup since water content is higher.

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Wells, W. R. MAPLE SYRUP: WHAT CONSUMERS OUGHT TO KNOW ABOUT IT. Amer. Forests 73(1): 28-29, 60-61. Jan. 1967. 99.8 F762.

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Willits, C. O. MAPLE SIRUP PRODUCERS MANUAL. U.S. Dept. Agr., Agr. Handbook 134, rev. 112 pp. map. Ref. pp. 107-112. June 1965. 1AG 84 Ah.

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Willits, C. O., and Porter, W. L. MAPLE SIRUP: II. A NEW HIGH-FLAVORED MAPLE SIRUP. U.S. Bur. Agr. and Indus. Chem. AIC-269, 3 pp. Ref. Apr. 1950. 1.932 A2 Ag82.

Describes process for making high-flavored maple sirup.

Winch, F. WHAT ASSOCIATIONS HAVE DONE AND CAN DO FOR NEW YORK MAPLE PRODUCERS.

(Sum.) Conf. Maple Prod. Rpt. Proc. 2: 22-23. 1953. A67.9 R31.

Use of maple producer associations to promote maple marketing.

Winch, F. E. TRENDS IN MAPLE PRODUCTION IN NEW YORK. Conf. Maple Prod. Proc., 6th. Conf., pp. 14-18. 1965. A67.9 R31.

Advances in tapping, sap handling, processing, and marketing have aided in promoting growth.

Woods, J. B. MAPLE SYRUP--LUXURY PRODUCT. Amer. Forests 54: 108-110, 140-141. Mar. 1948. 99.8 F762.

Discusses the New England maple products industry during 1904-47.

## SORGHUM

Denton, A. A. SORGHUM SIRUP MANUFACTURE. Sci. Amer. S.52: 21626-9. Nov. 9, 1901. 11. 470 Sci. 25.

Describes manufacturing procedure of sorghum sirup with special reference to small sirup factories which have simplest equipment and do not require dangerous chemicals or expert skill.

U.S. Department of Agriculture. SWEET SORGHUM: OBSTACLE OVERCOME. Agr. Res. 18 (3): 16. Sept. 1969. 1.98 Ag84.

Describes new method to obtain sweet sorghum sirup.

## UTILIZATION

Ballinger, Roy A., and Larkin, L. C. SWEETENERS USED BY FOOD PROCESSING INDUSTRIES IN THE UNITED STATES. THEIR COMPETITIVE POSITION IN THE CANNING INDUSTRY. U.S. Dept. Agr., Agr. Econ. Rpt. 20. 16 pp. Nov. 1962. A 281.9 AgBA.

Ballinger, Roy A., and Larkin, L. C. SWEETENERS USED BY THE DAIRY INDUSTRY. U.S. Dept. Agr., Agr. Econ. Rpt. No. 30. 18 pp. Apr. 1963. A 281.9 AgBA.

Ballinger, Roy A., and Larkin, L. C. SWEETENERS USED BY THE BEVERAGE INDUSTRY. U.S. Dept. Agr., Agr. Econ. Rpt. No. 31. 15 pp. May 1963. A 281.9 AgBA.

Ballinger, Roy A., and Larkin, L. C. SWEETENERS USED BY THE BAKING INDUSTRY. U.S. Dept. Agr., Agr. Econ. Rpt. No. 32. 15 pp. May 1963. A 281.9 AgBA.

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Ballinger, Roy A., and Larkin, L. C. SWEETENERS USED BY FOOD PROCESSING INDUSTRIES: THEIR COMPETITIVE POSITION IN THE UNITED STATES. U.S. Dept. Agr., Agr. Econ. Rpt. No. 48. 22 pp. Jan. 1964. A 281.9 AgBA.

This series discusses characteristics of various sweeteners, U.S. consumption of major sweeteners, quantity of sweeteners used in food industries, elasticity of demand for sweeteners by industrial users, and industrial developments in the use of sweeteners.

Berkes, R. F. CUSTOM-BLENDS LIQUID SWEETENERS FOR PRODUCT IMPROVEMENT. Food Proc. 24(5): 158-159, 173. May 1963. 389.8 F7325.

Suggestions for using liquid sweetener blends to improve products in major food industries.

Berman, M. MORE SUGAR MEANS BETTER CANDY. Confectioners J. 73(872): 14, 19, 22. Sept. 1947. 389.8 C76.

Effect of lack of sugar on declining candy sales.

Bertuccio, J. F. MECHANICAL HANDLING OF BULK SUGAR. Mfg. Confectioner 34(8, i.e. 7): 24-25. July 1954. 389.8 M31.

When dry bulk sugar is used by food plants, extra space for manufacturing is available, in-plant traffic is reduced, housekeeping is improved, sanitation is simplified, and freight is paid on 100-percent usable sugar.

Bertuccio, J. F. MECHANICAL HANDLING OF BULK SUGAR. Internat'l. Confectioner 64 (11): 8, 25. Nov. 1954. 389.8 In214.

Smooth flow of bulk sugar through receiving, storage, and processing is accomplished at low cost with greatest efficiency.

Borden, B. BULK LIQUID SWEETENERS--ENGINEERING AND ECONOMICS. Amer. Soc. Bakery Engin. Proc. 34: 79-84. 1958. 389.9 AM 37 P.

Liquid sweetener storage and transportation in food plants.

Bourne, M. C., and Robinson, W. B. A TOUCH OF SUGAR HELPS THE FLAVOR OF CANNED BEETS. Canner/Packer 137(6): 24. June 1968. 286.83 C16.

Addition of 8-12 percent more sugar was scored highest by consumer taste panel.

Boyle, J. E. INFORMATION CONCERNING USE OF SUGARS IN ICE CREAM PRODUCTS. Ice Cream Field 69(4): 69, 72, 80, 82, 84, 86. Apr. 1957. 389.8 Ic23.

Combination of corn syrup or corn syrup solids and sugar builds solids without excess sweetness.

Boyle, J. E. THE USE OF SUGAR IN ICE CREAM AND RELATED PRODUCTS. *Ice Cream Trade J.* 53(4): 34, 144, 159-164. Apr. 1957. 389.8 Ic 2.

Discusses variation in sweetness degree and intensity of different types of sugar and the value of sugar in ice cream manufacture.

Bureau of Agricultural and Industrial Chemistry. REPORT OF STUDIES OF UNIFORMITY OF QUALITY OF SUGARS. U.S. Bur. Agr. and Indus. Chem. AIC-93. 45 pp. Processed. New Orleans, 1945. 1.932 A2Ag82.

Biological studies of sugar, part II.

Burke, W. E. DEXTRAN FOR NATIONAL DEFENSE. *Sugar* 48(11): 50-51. Nov. 1953. 65.8 F11.

Outlines important role of dextran, which is obtained from sugar waste, as a blood volume restorer in place of blood plasma.

Business Week. LIQUID SUGAR SWEETENS MORE PROCESSED FOODS. 94. Oct. 23, 1948. 280.8 SY8. Commerce HF5001 M21.

Chief markets of liquid sugar are beverage, candy, fountain sirups, ice cream, and preserve industries.

Cook, I. L. LIQUID SUGAR STORAGE: ONE TANK, TWO TANKS OR THREE? *Ice Cream Trade J.* 58(5): 101. May 1962. 389.8 IC2.

Discusses relationship of the number of tanks to the size of the plant and its distance from the sugar refinery.

Cronkhite, K. B. REVOLUTION IN SUGAR INDUSTRY: LIQUID SUGAR. *J. of Home Econ.* 40: 143-144. Mar. 1948. 321. 8 J82.

Use of liquid sugar by institutions, small bakeries, confectioners, and soda fountains.

Cruess, W. V. SUGAR IMPROVES FROZEN PEAS. *Fruit Prod. J. and Amer. Food Mfr.* 29: 7, 29. Sept. 1949. 389.8 F94.

Peas with 3 percent-added sugar were rated most desirable by consumer taste panel. Added sugar might mask stale flavor often found in frozen peas stored 6 months or longer.

Daldone, L. F. UNRATIONED SWEETENERS MAY ANCHOR RISING SUGAR PRICES. *Confectionery. Ice Cream World* 37(20): 15, 63. May 16, 1947. 389.8 C767.

Higher prices of standard sweeteners after decontrol may force manufacturers to use unrationed sweeteners.

Davidson, F. A. SUGAR INDUSTRY AIDS ICE CREAM MANUFACTURERS, CONFECTIONERY-ICE CREAM WORLD 42(17): 26. Oct. 21, 1949. 389.8c767.

Most outstanding contributions are development of liquid sugar and research on the relation between sugar and diabetes.

De Lima, E. A. BUYER ON HIS OWN. *Ice Cream Field* 50(2): 30, 35. Aug. 1947. 389.8 IC 23.

After decontrol, problems of transporting bulk-refined sugar, use of liquid sugar, and application of ion exchange process must be faced by the sugar buyer.

Dyer, B. W., and Company. SUGAR MARKETS WILD. Natl. Bottlers' Gaz. 69(822): 20. Aug. 1950. 390.8 N21.

Domestic sugar boarding and purchase of U.S. offshore supplies by foreign countries.

Fieger, E. A. SYRUP VS. DRY SUGAR PACKS FOR FROZEN PEACHES. (Abs.) Assoc. South Agr. Workers Proc. 47: 115. 1950. 4 C 82.

Comparison of quality of peaches packed in sirup and of those packed in dry sugar.

Finnegan, E. J., and Sheuring, J. J. CONSUMER PREFERENCES FOR SUGAR LEVELS IN ICE CREAM. Ice Cream Field Trade J. 148(2): 32-34, 36. Nov. 1965. 389.8 IC2.

Rank analysis of an incomplete block design, using paired comparisons, was done in consumer preference study of flavor and body texture in chocolate ice cream.

Fisher, E. WHY THE BAKER SHOULD CONSIDER HANDLING FLOUR AND SUGAR IN BULK.

Bakers Weekly. 181(5): 54, 56. Feb. 2, 1959. 389.8 B172.

Describes savings in handling and ingredient costs, less floor space, and improved sanitation.

Fisher, H. S. HOW TO SAVE ON YOUR SUGAR. Natl. Bottler's Gaz. 69(819): 32-33, 35-36, 39. May 1950. 390.8 N21.

In-plant costs can be reduced or eliminated using other than bagged dry sugar.

Food Engineering. NEW "SUGAR SERVICE" PROCESSING LINE. 24(10): 136-139. Oct. 1952. 389.8 F737.

Flow chart showing preparation of liquid blend and corn sirup products used in food processing plant.

Garrott, William N. DISTRIBUTION OF NUTRITIVE SWEETENERS BY PRIMARY DISTRIBUTORS FOR CONSUMPTION IN THE CONTINENTAL UNITED STATES, 1956-68. Sugar Reports No. 207, pp. 7-15. U.S. Dept. Agr., Agr. Stabil. and Conserv. Serv. Washington, Aug. 1969. 1.956 Su38.33.

Per capita distribution; share of total distribution.

Garrott, William N. DISTRIBUTION OF NUTRITIVE SWEETENERS BY TYPE OF BUYER. Sugar Reports No. 210, pp. 6-24. U.S. Dept. Agr., Agr. Stabil. and Conserv. Serv. Washington, Nov. 1969. 1.956 Su38.33.

Discusses quantities of sugar, dextrose, and corn sirup distributed; each share of total sweetener distributed; and relative importance of nutritive sweeteners by type of buyer.

Garrott, William N. NUTRITIVE SWEETENERS: WHOLESALE PRICE COMPARISONS 1956-68.

Sugar Reports No. 213, pp. 7-26. U.S. Dept. Agr., Agr. Stabil. and Conserv. Serv. Washington, Feb. 1970. 1.956 Su38.33.

Price trends, movements, and distribution.

Geisman, J. R., and Van Rotteisberghe, P. DEVELOP NEW SWEETENING FORMULA FOR SAUERKRAUT. Ohio Rep. Res. Devlpmt. Biol. Agr. Home Econ. 52(1): 6-7. Jan./Feb. 1967. L00 OH35.

Results of taste panel tests indicated that 20-25 percent sugar was minimum that could be detected.

Gerhasi, F. WHERE'S ALL THE SUGAR? *Colliers*. 116: 20. Sept. 8, 1945. il. Lib. Congress AP2 C65.

Describes sugar as a basic raw material for production of acetone, synthetic rubber, and citric acid.

Grantham, J. F., and Havighorst, C. R. NEW--LOCAL SUGAR PROCESSING. *Food Engin.* 24(10): 71-72, 164, 166, 168-169. Oct. 1952. 3898. F737.

New mechanical and highly instrumented facilities supply users, formerly out of delivery range by singly operated sugar process lines, set up at railhead.

Graw, F. P. KNOW THE INGREDIENTS YOU USE: SUGAR. *Bakers's Helper* 77(1083): 92. Jan. 25, 1947. 389.8 B17.

Types and sources of sugar.

Greene, E. W. CONSIDER SUGAR: A CHEMURGIC CROP. *Chemurg. Digest* 19(6): 5-6. June 1916. 381 N213 NA.

Present chemurgic uses of sugar include molding compounds, furfural, and foundry cores.

Greene, E. W. HOW TO INCREASE INDUSTRIAL USES OF SUGAR AND BY-PRODUCTS. *Chemurg. Digest* 16(6): 4-7, 12. June 1957. 381 N213 NA.

Report of Task Group on Sugar of the President's Commission on Increased Industrial Use of Agricultural Products.

Greene, E. W. SUGAR--A CHEMURGIC CROP. *Sugar Molecule* 11(2): 9-11. Spring/Summer 1960. 65.8 SU325.

A familiar food is finding markets in industrial uses-resins, foundry cores, detergents.

Greene, E. W. SUGAR--A CHEMURGIC CROP: A FAMILIAR FOOD IS FINDING MARKETS IN MANY INDUSTRIAL FIELDS. *Sugar Molecule* 11(2): 9-11. Spring/Summer 1960. 65.8 SU325.

Basic and applied research for uses of sugar for nonfood purposes.

Greene, E. W. SUGAR--A CHEMURGIC CROP: A FAMILIAR FOOD IS FINDING MARKETS IN MANY INDUSTRIAL FIELDS. *Sugar J.* 23(9): 21-23. Feb. 1961. 65.8 Su391.

Industrial uses of sugar.

Greig, W. S. CONSUMER IMAGES OF SUGAR AND SYNTHETIC SWEETENERS. *Mich. Agr. Expt. Sta. Res. Bul.* 18, 41 pp. Ref. 1968. 100 N58R.

Review of the status of the competitive relationship between sugar and synthetic sweeteners.

Halle, F. BULK HANDLING OF INGREDIENTS. *Amer. Soc. Bakery Engin. Proc.* 36: 104-114. 1960. (Includes Discussion.) 399.9 AM 37P.

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Desk and table tops coated with allyl starch and allyl glucose displayed phenomenal resistance to common forms of abuse.

Hass, H. B. FUTURE OF SUGAR AS A RAW MATERIAL. Sugar y Azucar 50(12): 43-44. Dec. 1955. 65.8 F11.

Potential uses of sugar-based noniomics--detergents, dried and instant foods, drying oils, paints, and varnishes.

Hass, H. B. HOW RESEARCH FINDS NEW MARKETS: A REVIEW OF POSSIBLE NEW OUTLETS FOR SUGAR IN THE NON-FOOD FIELD. Sugar Molecule 10: 6-10, 16. Summer 1956. 65.8 SU325.

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Hass, H. B. SUGAR RESEARCH FOR CANNERS. Natl. Canners Assoc. Inform. Let. 1570. 50-52. Jan. 31, 1956. (Fruit Canning.) 389.9 N214 IN.

Significant preference indicated for peaches packed in sirup of highest density.

Hass, H. B. SUGAR RESEARCH: WHAT'S AHEAD. Sugar Molecule 9(3): 15-20. Winter 1955/56. 65.8 SU325.

Discusses solution to sugar surpluses through making sugar more useful.

Hass, H. B. SUGAR RESEARCH: WHAT'S AHEAD. Sugar J. 18(9): 20-21, 24, 26. Feb. 1956. 65.8 Su391.

Improved living standards point to need for sugar-based chemical products.

Hass, H. B., and Lamborn, O. H. ECONOMICS OF SUCROSE. Indus. and Engin. Chem. 47: 1392-1397. Ref. July 1955. 381 J825.

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Hauten, A. J. HOW TO STRETCH YOUR SUGAR. Ice Cream Rev. 28(12): 37-38. July 1945. 389.8 IC22.

Sugar utilization in ice cream production.

Hayenga, M. L. SWEETENER COMPETITION AND SUGAR POLICY. J. Farm Econ. 49(5): 1362-1366. Dec. 1967. 280.8 1822.

Exploration of the technological, legal, and economic factors affecting present and potential sweetener substitution and competition in major sweetener-using industries.

Hayenga, Marvin L. SWEETENER SUBSTITUTION IN FOOD PROCESSING INDUSTRIES. Univ. of Calif., Berkeley. 1967. Z5055 .U49D53.

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Discusses research in sucrochemistry, especially use of sugar in plastics, surface coatings, and surfacants.

Hickson, J. L. SUGAR AND ITS COMPETITION --THE CHALLENGE. Sugar Club Ann. 6: 27-35. 1967. 286. 3659 SU3.

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Hodson, R. C., and Sullivan, G. D. LEASING VERSUS BUYING LAND FOR SUGARCANE PRODUCTION. La. Agr. Expt. Sta. D.A.E. Res. Rpt. 370, 13 pp. Mar. 1968. 100 L935.

Net profits for sugarcane lands at varying price levels for sugarcane and at varying rental rates and purchase prices for land.

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Hughes, M. F. LIQUID SUGAR. Ice Cream Trade J. 49(12): 60, 62, 97-99. Dec. 1953. 389.8 IC2.

Describes advantages of liquid sugar over other types: elimination of manual handling, storage economy, and sanitation.

Hughes, M. F. LIQUID SUGAR IN THE ICE CREAM INDUSTRY. Ice Cream Rev. 41(8): 40, 50-54, 56, 58. Mar. 1958. 389.8 IC22.

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Hughes, M. F. LIQUID SUGAR--WHAT IT IS. Ice Cream Rev. 37(5): 44-45, 82, 84, 86. Ref. Dec. 1953. 389.8 IC22.

Production process for liquid sugar; quality factors.

Hutchinson, W. STRENGTH OF SWEETNESS. Ladies Home J. 46: 26. Mar. 1929. Lib. Congress AP2 L135.

Discussion of the medicinal values of sugar--intravenous feeding.

Junk, W. R. BULK SUGAR FOR CANNERS. Sugar Molecule. 9(4): 13-15. Spring 1956. 65.8 SU 325.

Economies and easier handling are offered by both liquid and dry bulk granulated sugar.

Keeney, P. G. THE SUGAR DILEMMA--COMMENTS OF A TECHNOLOGIST. Ice Cream Trade J. 59(6): 50, 52, 103-107. June 1963. 389.8 IC2.

Increase product price or modify formula and ingredients when price of sugar is increased.

Kelly, N. SUGAR. In Heid, J.L., and Joslyn, M. A. Fundamentals of Food Processing Operations. pp. 30-61. Ref. 1967. TP370 .H4.

Describes basic processes of sugar manufacturer, and types and grades of sugar.

Kelly, N. SUGAR. In Joslyn, M. A., and Heid, J. L., eds. Food Processing Operations, pp. 1-32. Ref. 1964. 389 J 78F.

Basic processes of sugar manufacture are summarized, and various types and grades are described.

Kelly, N. SUGAR: CANNERS, FREEZERS ARE 4TH LARGEST CONSUMERS. Canner/Packer 132 (10): 4, 10. Sept. 25, 1963. 286.83 C16.

During 1962, 17 million hundredweight of sugar, of which one-third was in bulk, was purchased by freezers and canners.

King, J. A. USE OF NEW AND ALTERNATIVE INGREDIENTS TO MEET WARTIME MATERIAL SHORTAGES. *Mfg. Confectioner* 23(7): 23-24. July 1943. 389.8 M31.  
Use of sweetener substitutes in candy.

Lamborn, O. H. WILL AMERICANS LOVE SUGAR IN 1948 AS THEY DID IN 1941? *Sugar Beet* 7(3): 18-19. Sept. 1947. 66.8 SU 34 B.

Discusses changes in consumer preferences for sugar as a result of rationing during World War II. Food manufacturers found consumers preferred a less sweet product, reflecting the use of more corn sweeteners during the war.

Lang, L. SUGAR, ITS USES AND ABUSES. *Confectioners J.* 78(93): 8, 12-14. Aug. 1952. 389.8 C76.

Discusses care and handling of sugar during manufacturing process in candy plants.

Literary Digest. DENATURED SUGAR. 47: 1171. Dec. 13, 1913. Lib. Congress AP2 L58.

Denatured sugar used in color and dying industries, tanning, hardening plaster molds, and mortar.

Lockhart, E. E. SUGAR: THE KEY SWEET. *Amer. Bottler* 96(628): 40, 136-139. Apr. 1953. 389.8 S08.

Appraisal of sugar characteristics and qualities, and effect of carbonated beverages containing sugar on diet and caloric consumption.

Long, L., Jr. SUGAR AND SUGAR BY-PRODUCTS IN THE PLASTICS INDUSTRY. *Sugar Res. Found. Technol. Rpt. Ser.* 5, 66 pp. Ref. Jan. 1949. 65.9 SU34T

Survey of patents and literature concerning the application of sugar and sugar byproducts in the plastics industry.

Loutfi, S. E., Bedford, C. L., and Robertson, W. F. THE USE OF SUGAR AND ASCORBIC ACID IN FROZEN MONTMORENSY CHERRIES. *Quick Frozen Foods* 14(12): 55-57,. Ref. July 1952. 389.8 Q4.

Comparative study using dry sugar and sugar syrup in cherry processing.

Lund, B. THE "NEW" LOOK IN ICE CREAM SUGAR. *Ice Cream Field* 53(1): 46, 77-80. Jan. 1, 1949. 389.8 IC23.

Development of sucrose and other sugar mixes used in the ice cream industry.

Manley, J. P. INDUSTRIAL USERS FIND ADVANTAGES IN HANDLING REFINED SUGAR IN BULK. *Sugar y Azucar* 51(2): 27-29. Feb. 1956. 65.8 F11.

Advantages include savings in differential between refinery prices of bagged and bulk sugars; lower overtime and overhead costs since more batches may be made; and reduction of domestic sugar price below that of offshore sugar prices.

Meade, G. P. SUGAR IN FOOD-PROCESSING HISTORY. *Sugar Molecule* 11(1): 11, 14-19. Ref. Fall/Winter 1959-60. 65.8 Su325.

Influence of sugar on food technology and processing has been greater than would be expected from its economic value since it forms a very small segment of food processing operations.

Meade, G. P. SUGAR: ITS IMPORTANCE IN FOOD PROCESSING HISTORY. *Sugar J.* 22(120): 13-14, 17, 19, 21-22. Ref. May 1960. 65.8 Su391.

Development of sugar as an ingredient in food processing.

Meeker, E. W. THE BULK SUGAR PICTURE--A RESUME. *Mfg. Confectioner* 34(8 i.e. 7): 21-23. July 1954. 389.8 M31.

Describes advantages, prospective cost savings, and storage and handling precautions for bulk sugar.

Meeker, E. W. THE TRANSPORTATION AND HANDLING OF BULK SUGAR. *Baking Indus.* 106 (1332): 54-56. Aug. 11, 1956. 389.8 B17.

Discusses monetary savings from use of bulk sugar and equipment required to handle the sugar efficiently and economically.

Micka, Jan. USING SUGAR TO BEST ADVANTAGE UNDER RATIONING. PARTS I-II. *Food Indus.* 15(6): 69-71, 124; (7): 74-75. June, July 1943. 389.8 F737.

Use of sugar in commercial baking.

Miller, G. E. BULK HANDLING OF DRY SUGAR. *Amer. Soc. Bakery Engin. B.* 155: 620-626. Nov. 1957. 389.9 AM 37B.

Describes general considerations in handling dry bulk sugar.

Miller, G. E., and others. SUGAR--IN FOOD PRODUCTS MANUFACTURE. *West. Canner and Packer* 48(7): 23-26, 31, 34. June 1956. 286. 83 W522.

Describes characteristics and forms of cane sugar and bulk-handling methods in food processing plants.

Mollenhaver, J. LIQUID SUGAR. *Baking Indus.* 106 (1332): 58-59. Aug. 11, 1956. 389.8 B17.

Discusses setup for handling liquid sugar in a bakery.

Oliver, M. PROBLEMS IN PRESERVATION BY THE USE OF SUGAR. In Hawthorn, J., and Leitch, J. M. eds. *Recent Advances in Food Sciences*, Vol. 2, pp. 265-271. Ref. 1962. 389.9 H31.

Reviews advances made in last decade in use of sugar to preserve fruit and fruit products.

Owen, W. L. BACTERIOLOGICALLY PURE SUGAR FOR SPECIALIZED INDUSTRIES. *Sugar y Azucar* 48(8): 52, 54-55, 63. Aug. 1953. 65.8 F11.

Less emphasis on the physical qualities of sugar and more on the microbial content of sugar by users.

Owen, W. L. PRODUCTION OF INDUSTRIAL DEXTRAN SEEN AS PROMISING OUTLET FOR SURPLUS SUCROSE. *Sugar y Azucar* 50(5): 47-48, 64. Ref. May 1955. 65.8 F11.

Future growth rate of U.S. sugar industry may depend on new industrial uses for sugar rather than per capita increase. Dextran threshold is estimated at 12 million pounds, representing 15,000 tons of sugar.

Owen, W. L. STANDARDS FOR SUGAR USED IN MEAT PACKING. *Sugar y Azucar* 51(7): 28-30. Ref. July 1956. 65.8 F11.

Describes procedure for establishing standards for sugar in meat packing.

Pagels, E. A. BULK SUGAR IN UNIT CONTAINERS. Mfg. Confectioner 33(8 i.e. 7): 26-30. July 1954. 389.8 M31.

Bulk sugar can save an industrial user \$0.30 per CWT over bagged sugar.

Pangborn, R. M., Nickerson, T. A. THE INFLUENCE OF SUGAR IN ICE CREAM. II. CONSUMERS PREFERENCES FOR STRAWBERRY ICE CREAM. Food Technol. 13(2): 107-109. Feb. 1959. 389.8 F7398.

Ice cream containing 19.2 percent sugar preferred over other samples; makes a more flavorful, richer, and creamier product.

Quinlan, D. SUGAR TYPES AND USES. Food Engin. 26(6): 85-86. June 1954. 389.8 F737.

Reviews sugar's quality-enhancing role in food. Lists types of sugar and their characteristics, and describes how sugar improves frozen vegetable flavor.

Rosenberg, M. M. LOW-GRADE SUGAR IN LAYER RATIONS. Hawaii Farm Sci. (Hawaii Sta.) 1(2): 1, 6. July 1952. 100 H314.

Low-grade sugars may be used as a emergency source of carbohydrates when mainland grains are not available.

Schualb, H. CHEMICAL MAGIC WITH SUGAR. Sci. Digest. 48: 3-7. Sept. 1960. il. Lib. Congress Q1 S383.

Describes food and nonfood uses of sugar, including textile finishing products, house paints, and glues.

Scientific American. CONSUMPTION OF SUGAR. S. 55: 22730. Mar. 7, 1903. 470 SCI 25.

U.S. consumption of sugar, 1825-1900.

Shanley, W. C. BULK AND LIQUID HANDLING OF SUGARS. South. Dairy Prod. J. 64(4): 53, 56-58. Oct. 1958. 44.8 SO 83.

Types of liquid sugar, transportation of liquid sugar, in-plant handling costs.

Shanley, W. C. THE BULK AND LIQUID HANDLING OF SUGARS. Ice Cream Rev. 41(12): 34, 50-53. July 1958. 389.8 IC22.

Discusses types of handling facilities for dry bulk and liquid sugars.

Stern, H. W. HOW MUCH SHERBETS, ICES AND ICE MILK? Ice Cream Rev. 26(11): 19, 53. June 1943. 389.8 IC22.

Amount of sugar required to produce satisfactory products.

Stillson, G. H. SUGAR IN THE CANNERY. Canner 104(13): 10-13, 26. Mar. 22, 1947. 286.83 C16.

Packaging, storage, and preparation of sirup.

U.S. Bureau of Human Nutrition and Home Economics. HOUSEHOLD USE OF SUGAR, SIRUPS, AND HONEY BY 235 FARM FAMILIES IN MEEKER AND WRIGHT COUNTIES, MINNESOTA, SPRING 1950. Preliminary. Washington, 1951. 2 pp. 1.982 A2H813.

Two-thirds of weekly sugar consumption was used in cooking.

U.S. Bureau of Human Nutrition and Home Economics. SUGARS AND SWEETS IN CITY DIETS, BASED ON FOOD CONSUMPTION SURVEYS OF 1948. U.S. Bur. Human Nutr. and Home Econ. Commod. Sum. 5, 12 pp. Nov. 1949. 1.982 A2 C733.

Sugars and sweets take 5 percent of food budget. Refined sugar purchases for home use represent about one-half of the sugar used in home diets in cities.

#### GENERAL

Alston, P. W. SUGARS IN THE CANNING OF FRUITS AND VEGETABLES. Adv. Chem. Ser. 12: 75-77. Feb. 1955. 381 AD 93.

Describes types of sweeteners used in canning fruits and vegetables: sucrose, saccharin, sucaryl, dulain, P-440.

American Chemical Society. Division of Agricultural and Food Chemistry. USE OF SUGARS AND OTHER CARBOHYDRATES IN THE FOOD INDUSTRY; A COLLECTION OF PAPERS COMPRISING THE SYMPOSIUM ON THE USE OF SUGARS AND OTHER CARBOHYDRATES IN THE FOOD INDUSTRY AT THE 123rd MEETING. Los Angeles, Calif. Mar. 1953. Adv. Chem. Ser. 12, 142 pp. Feb. 1955. 381 AD 93.

Contains papers relating to role of sugar in food industry; liquid sugars in food industry; sugars in baking industry; sugars in frozen foods; and role of sweeteners in food flavor.

Ballinger, R. A. ECONOMIC RESEARCH AND WORLD SUGAR PROBLEMS. Agr. Sci. Rev. 5 (2): 23-28. Ref. Second Quart. 1967. A31.3 AG893.

Concentrates on economic characteristics of sugar and current economic research needed.

Ballinger, R. A. SUGAR DURING WORLD WAR II. 33 pp., processed. 1946. (War Records Monog. 3). 1.941 A5Wi92.

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